

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A distributed computer system including at least one computer, said at least one computer programmed to perform processing and analysis, said system comprising:

1) a multi-agent ~~process management system~~ comprising a plurality of collaborative agents arranged in operation to manage among themselves resources to carry out processes to provide one or more services;

2) a performance ~~data analysis~~ system for use in storing and analyzing data generated during use of said multi-agent ~~process management system~~, said performance ~~data analysis~~ system having:

i) data storage for storing:

a) service definitions each identifying a plurality of processes involved in ~~at least one process associated with~~ provision of a service by the multi-agent ~~process management~~ system;

b) a log of processes allocated, by the multi-agent ~~process management system~~ in use, to respective resources managed by said multi-agent ~~process management system~~ to provide a service;

c) a log of states of said resources, arising in use of the multi-agent process management system to provide the service, with respect to carrying out the allocated processes;

ii) one or more inputs for receiving:

d) a service request identifying a data analysis service to be provided by the performance data analysis system to the multi-agent process management system; and

e) resource allocation and resource state data, provided by said multi-agent process management system in use, for storage in said log of processes and said log of states; and

iii) a performance data analyzer for analyzing the logged process and state information

the performance data analysis system being arranged to generate, and output to the multi-agent process management system, a performance measure with respect to said resources, based on analysis of the logged process and state information.

2. (Currently Amended) A distributed computer system as in claim 1 wherein the log of states is maintainable during use of an identified multi-agent process management system in providing more than one instance of a service, such that performance of at least one resource may be analyzed with respect to each of said instances.

3. (Currently Amended) A distributed computer system as in claim 1 wherein the log of states is maintainable during use of an identified multi-agent process

~~management-system~~ in providing instances of at least two different services, such that performance of at least one resource may be analyzed with respect to each of said instances.

4. (Currently Amended) A distributed computer system as in claim 1 wherein the performance data-analyzer measures the number of occurrences of a particular state for respective resources and the performance measure is determined according to whether the number of occurrences reaches a predetermined threshold.

5. (Previously Presented) A distributed computer system as in claim 4 wherein the threshold comprises a percentage number of occurrences of said particular state in relation to the number of occurrences of that state plus other states.

6. (Previously Presented) A distributed computer system as in claim 1 wherein the states available to a respective resource in carrying out an allocated process comprise at least failure and success.

7. (Currently Amended) A distributed computer system as in claim 1 wherein the data received from the multi-agent ~~process-management-system~~ in use includes a start time for provision of the relevant service and at least one of said log of processes and said log of states also logs the time taken by at least one identified resource to carry out a process.

Claim 8 (Canceled).

Claim 9 (Canceled).

10. (Currently Amended) A method for performance data-analysis in a distributed computer system comprising a multi-agent process management-system comprising a plurality of collaborative agents arranged in operation to, among themselves, manage resources to carry out processes to provide one or more services, said method comprising:

- i) storing:
  - a) service definitions, each identifying a plurality of processes involved in ~~at least one process associated with~~ provision of a service by the multi-agent process management-system;
  - b) a log of processes allocated, by the multi-agent process management-system in use, to respective resources managed by said multi-agent process management-system to provide a service;
  - c) a log of states of said resources, arising in use of the multi-agent process management-system to provide the service, with respect to carrying out the allocated processes;
- ii) receiving:
  - d) a service request identifying a performance data-analysis service to be provided; and
  - e) resource allocation and resource state data, provided by said multi-agent process management-system in use, for storage in said log of processes and said log of states; and
- iii) analyzing the logged process and state information

generating and outputting to the multi-agent ~~process management~~-system, a performance measure with respect to said resources, based on analysis of the logged process and state information.

11. (Currently Amended) A method as in claim 10 wherein the log of sates is maintainable during use of an identified multi-agent ~~process management~~-system in providing more than one instance of a service, such that performance of at least one resource may be analyzed with respect to each of said instances.

12. (Currently Amended) A method as in claim 10 wherein the log of states is maintainable during use of an identified multi-agent ~~process management~~-system in providing instances of at least two different services, such that performance of at least one resource may be analyzed with respect to each of said instances.

13. (Currently Amended) A method as in claim 10 wherein the performance ~~data-analysis~~ measures the number of occurrences of a particular state for respective resources and the performance measure is determined according to whether the number of occurrences reaches a predetermined threshold.

14. (Previously Presented) A method as in claim 13 wherein the threshold comprises a percentage number of occurrences of said particular state in relation to the number of occurrences of that state plus other states.

15. (Previously Presented) A method as in claim 10 wherein the states available to a respective resource in carrying out an allocated process comprises at least failure and success.

16. (Currently Amended) A method as in claim 10 wherein the data received from the multi-agent ~~process management~~ system in use includes a start time for provision of the relevant service and at least one of said log of processes and said log of states also logs the time taken by at least one identified resource to carry out a process.

Claim 17 (Canceled).

18. (New) A distributed computer system including at least one computer, said at least one computer programmed to perform processing and analysis, said system comprising:

- 1) a multi-agent system comprising a plurality of collaborative agents arranged in operation to manage among themselves resources to carry out processes to provide one or more services;
- 2) a performance analysis system for use in storing and analyzing data generated during use of said multi-agent system, said performance analysis system having:
  - i) data storage for storing:
    - a) collaboration data indicative of how said agents have organized the resources they represent in order to provide a service; and
    - b) resource performance data indicative of the performance of said resources in use when so organized;

- ii) one or more inputs for receiving a service request identifying a performance analysis service to be provided by the performance analysis system to the multi-agent system; and
- iii) a performance analyser for analyzing the collaboration data and resource performance data to generate a performance measure with respect to said resources as organized by said multi-agent system.

19. (New) A distributed computer system as in claim 18 wherein said collaboration data comprises representations of service agreements made between said agents, and said performance data indicates whether said service agreements have been met.